



SUBSTITUTE SEQUENCE LISTING

<110> Laub, Ruth
Di Giambattista, Mario

<120> ANTIGENIC POLYPEPTIDE SEQUENCE OF FACTOR
VIII, FRAGMENTS AND/OR EPITOPES OF THIS SEQUENCE

<130> VANMA48.001APC

<140> 08/765,837

<141> 1999-09-07

<150> PCT/BE95/00068

<151> 1995-07-14

<150> BE 94/00666

<151> 1994-07-14

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 13

<212> PRT

<213> Homo sapiens

<220>

<221> DOMAIN

<222> (1)...(13)

<223> Fragment of Human Factor VIII Protein from Arg
1652 through Tyr 1664

<400> 1

Arg Thr Thr Leu Gln Ser Asp Gln Glu Glu Ile Asp Tyr
1 5 10

<210> 2

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> DOMAIN

<222> (1)...(16)

<223> Fragment of Human Factor VIII Protein from Asp
1681 through Arg 1696

<400> 2

Asp Glu Asp Glu Asn Gln Ser Pro Arg Ser Phe Gln Lys Lys Thr Arg
1 5 10 15

<210> 3

<211> 10
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(10)
 <223> Fragment of Human Factor VIII Protein from Thr
 1739 through Tyr 1748

<400> 3
 Thr Asp Gly Ser Phe Thr Gln Pro Leu Tyr
 1 5 10

<210> 4
 <211> 9
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(9)
 <223> Fragment of Human Factor VIII Protein from Asn
 1777 through Phe 1785

<400> 4
 Asn Gln Ala Ser Arg Pro Tyr Ser Phe
 1 5

<210> 5
 <211> 22
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(22)
 <223> Fragment of Human Factor VIII Protein from Glu
 1794 through Tyr 1815

<400> 5
 Glu Asp Gln Arg Gln Gly Ala Glu Pro Arg Lys Asn Phe Val Lys Pro
 1 5 10 15
 Asn Glu Thr Lys Thr Tyr
 20

<210> 6
 <211> 9
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(9)
 <223> Fragment of Human Factor VIII Protein from Met

1823 through Asp 1831

<400> 6

Met Ala Pro Thr Lys Asp Glu Phe Asp
1 5

<210> 7

<211> 7

<212> PRT

<213> Homo sapiens

<220>

<221> DOMAIN

<222> (1)...(7)

<223> Fragment of Human Factor VIII Protein from Glu
1885 through Phe 1891

<400> 7

Glu Thr Lys Ser Trp Tyr Phe
1 5

<210> 8

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<221> DOMAIN

<222> (1)...(9)

<223> Fragment of Human Factor VIII Protein from Glu
1893 through Ala 1901

<400> 8

Glu Asn Met Glu Arg Asn Cys Arg Ala
1 5

<210> 9

<211> 9

<212> PRT

<213> Homo sapiens

<220>

<221> DOMAIN

<222> (1)...(9)

<223> Fragment of Human Factor VIII Protein from Asp
1909 through Arg 1917

<400> 9

Asp Pro Thr Phe Lys Glu Asn Tyr Arg
1 5

<210> 10

<211> 21

<212> PRT

<213> Homo sapiens

<220>

<221> DOMAIN

<222> (1)...(21)

<223> Fragment of Human Factor VIII Protein from Ala 108
through Val 128

<400> 10

Ala	Ser	Glu	Gly	Ala	Glu	Tyr	Asp	Asp	Gln	Thr	Ser	Gln	Arg	Glu	Lys
1				5					10					15	
Glu	Asp	Asp	Lys	Val											
			20												

<210> 11

<211> 12

<212> PRT

<213> Homo sapiens

<220>

<221> DOMAIN

<222> (1)...(12)

<223> Fragment of Human Factor VIII Protein from Glu 181
through Leu 192

<400> 11

Glu	Gly	Ser	Leu	Ala	Lys	Glu	Lys	Thr	Gln	Thr	Leu
1				5					10		

<210> 12

<211> 16

<212> PRT

<213> Homo sapiens

<220>

<221> DOMAIN

<222> (1)...(16)

<223> Fragment of Human Factor VIII Protein from Asp 203
through Gln 218

<400> 12

Asp	Glu	Gly	Lys	Ser	Trp	His	Ser	Glu	Thr	Lys	Asn	Ser	Leu	Met	Gln
1				5					10					15	

<210> 13

<211> 29

<212> PRT

<213> Homo sapiens

<220>

<221> DOMAIN

<222> (1)...(29)

<223> Fragment of Human Factor VIII Protein from Asp 327
through Met 355

<400> 13
 Asp Ser Cys Pro Glu Glu Pro Gln Leu Arg Met Lys Asn Asn Glu Glu
 1 5 10 15
 Ala Glu Asp Tyr Asp Asp Asp Leu Thr Asp Ser Glu Met
 20 25

<210> 14
 <211> 23
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(23)
 <223> Fragment of Human Factor VIII Protein from Asp 403
 through Lys 425

<400> 14
 Asp Asp Arg Ser Tyr Lys Ser Gln Tyr Leu Asn Asn Gly Pro Gln Arg
 1 5 10 15
 Ile Gly Arg Lys Tyr Lys Lys
 20

<210> 15
 <211> 11
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(11)
 <223> Fragment of Human Factor VIII Protein from Val 517
 through Arg 527

<400> 15
 Val Glu Asp Gly Pro Thr Lys Ser Asp Pro Arg
 1 5 10

<210> 16
 <211> 9
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(9)
 <223> Fragment of Human Factor VIII Protein from His 693
 through Gly 701

<400> 16
 His Asn Ser Asp Phe Arg Asn Arg Gly
 1 5

<210> 17

<211> 16
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(16)
 <223> Fragment of Human Factor VIII Protein from Ser 710
 through Asp 725

<400> 17
 Ser Cys Asp Lys Asn Thr Gly Asp Tyr Tyr Glu Asp Ser Tyr Glu Asp
 1 5 10 15

<210> 18
 <211> 9
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(9)
 <223> Fragment of Human Factor VIII Protein from Lys
 2085 through Phe 2093

<400> 18
 Lys Thr Gln Gly Ala Arg Gln Lys Phe
 1 5

<210> 19
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(14)
 <223> Fragment of Human Factor VIII Protein from Asp
 2108 through Gly 2121

<400> 19
 Asp Gly Lys Lys Trp Gln Thr Tyr Arg Gly Asn Ser Thr Gly
 1 5 10

<210> 20
 <211> 8
 <212> PRT
 <213> Homo sapiens

<220>
 <221> DOMAIN
 <222> (1)...(8)
 <223> Fragment of Human Factor VIII Protein from Gly
 2242 through Lys 2249

<400> 20

Gly Val Thr Thr Gln Gly Val Lys

1

5

<210> 21

<211> 2351

<212> PRT

<213> Homo sapiens

<220>

<221> SIGNAL

<222> (1)...(19)

<400> 21

Met Gln Ile Glu Leu Ser Thr Cys Phe Phe Leu Cys Leu Leu Arg Phe
 -15 -10 -5
 Cys Phe Ser Ala Thr Arg Arg Tyr Tyr Leu Gly Ala Val Glu Leu Ser
 1 5 10
 Trp Asp Tyr Met Gln Ser Asp Leu Gly Glu Leu Pro Val Asp Ala Arg
 15 20 25
 Phe Pro Pro Arg Val Pro Lys Ser Phe Pro Phe Asn Thr Ser Val Val
 30 35 40 45
 Tyr Lys Lys Thr Leu Phe Val Glu Phe Thr Asp His Leu Phe Asn Ile
 50 55 60
 Ala Lys Pro Arg Pro Pro Trp Met Gly Leu Leu Gly Pro Thr Ile Gln
 65 70 75
 Ala Glu Val Tyr Asp Thr Val Val Ile Thr Leu Lys Asn Met Ala Ser
 80 85 90
 His Pro Val Ser Leu His Ala Val Gly Val Ser Tyr Trp Lys Ala Ser
 95 100 105
 Glu Gly Ala Glu Tyr Asp Asp Gln Thr Ser Gln Arg Glu Lys Glu Asp
 110 115 120 125
 Asp Lys Val Phe Pro Gly Gly Ser His Thr Tyr Val Trp Gln Val Leu
 130 135 140
 Lys Glu Asn Gly Pro Met Ala Ser Asp Pro Leu Cys Leu Thr Tyr Ser
 145 150 155
 Tyr Leu Ser His Val Asp Leu Val Lys Asp Leu Asn Ser Gly Leu Ile
 160 165 170
 Gly Ala Leu Leu Val Cys Arg Glu Gly Ser Leu Ala Lys Glu Lys Thr
 175 180 185
 Gln Thr Leu His Lys Phe Ile Leu Leu Phe Ala Val Phe Asp Glu Gly
 190 195 200 205
 Lys Ser Trp His Ser Glu Thr Lys Asn Ser Leu Met Gln Asp Arg Asp
 210 215 220
 Ala Ala Ser Ala Arg Ala Trp Pro Lys Met His Thr Val Asn Gly Tyr
 225 230 235
 Val Asn Arg Ser Leu Pro Gly Leu Ile Gly Cys His Arg Lys Ser Val
 240 245 250
 Tyr Trp His Val Ile Gly Met Gly Thr Thr Pro Glu Val His Ser Ile
 255 260 265
 Phe Leu Glu Gly His Thr Phe Leu Val Arg Asn His Arg Gln Ala Ser
 270 275 280 285
 Leu Glu Ile Ser Pro Ile Thr Phe Leu Thr Ala Gln Thr Leu Leu Met
 290 295 300
 Asp Leu Gly Gln Phe Leu Leu Phe Cys His Ile Ser Ser His Gln His
 305 310 315
 Asp Gly Met Glu Ala Tyr Val Lys Val Asp Ser Cys Pro Glu Glu Pro

```

      320      325      330
Gln Leu Arg Met Lys Asn Asn Glu Glu Ala Glu Asp Tyr Asp Asp Asp
335      340      345
Leu Thr Asp Ser Glu Met Asp Val Val Arg Phe Asp Asp Asp Asn Ser
350      355      360      365
Pro Ser Phe Ile Gln Ile Arg Ser Val Ala Lys Lys His Pro Lys Thr
      370      375      380
Trp Val His Tyr Ile Ala Ala Glu Glu Glu Asp Trp Asp Tyr Ala Pro
      385      390      395
Leu Val Leu Ala Pro Asp Asp Arg Ser Tyr Lys Ser Gln Tyr Leu Asn
400      405      410
Asn Gly Pro Gln Arg Ile Gly Arg Lys Tyr Lys Lys Val Arg Phe Met
415      420      425
Ala Tyr Thr Asp Glu Thr Phe Lys Thr Arg Glu Ala Ile Gln His Glu
430      435      440      445
Ser Gly Ile Leu Gly Pro Leu Leu Tyr Gly Glu Val Gly Asp Thr Leu
      450      455      460
Leu Ile Ile Phe Lys Asn Gln Ala Ser Arg Pro Tyr Asn Ile Tyr Pro
      465      470      475
His Gly Ile Thr Asp Val Arg Pro Leu Tyr Ser Arg Arg Leu Pro Lys
480      485      490
Gly Val Lys His Leu Lys Asp Phe Pro Ile Leu Pro Gly Glu Ile Phe
495      500      505
Lys Tyr Lys Trp Thr Val Thr Val Glu Asp Gly Pro Thr Lys Ser Asp
510      515      520      525
Pro Arg Cys Leu Thr Arg Tyr Tyr Ser Ser Phe Val Asn Met Glu Arg
      530      535      540
Asp Leu Ala Ser Gly Leu Ile Gly Pro Leu Leu Ile Cys Tyr Lys Glu
      545      550      555
Ser Val Asp Gln Arg Gly Asn Gln Ile Met Ser Asp Lys Arg Asn Val
      560      565      570
Ile Leu Phe Ser Val Phe Asp Glu Asn Arg Ser Trp Tyr Leu Thr Glu
      575      580      585
Asn Ile Gln Arg Phe Leu Pro Asn Pro Ala Gly Val Gln Leu Glu Asp
590      595      600      605
Pro Glu Phe Gln Ala Ser Asn Ile Met His Ser Ile Asn Gly Tyr Val
      610      615      620
Phe Asp Ser Leu Gln Leu Ser Val Cys Leu His Glu Val Ala Tyr Trp
      625      630      635
Tyr Ile Leu Ser Ile Gly Ala Gln Thr Asp Phe Leu Ser Val Phe Phe
      640      645      650
Ser Gly Tyr Thr Phe Lys His Lys Met Val Tyr Glu Asp Thr Leu Thr
      655      660      665
Leu Phe Pro Phe Ser Gly Glu Thr Val Phe Met Ser Met Glu Asn Pro
670      675      680      685
Gly Leu Trp Ile Leu Gly Cys His Asn Ser Asp Phe Arg Asn Arg Gly
      690      695      700
Met Thr Ala Leu Leu Lys Val Ser Ser Cys Asp Lys Asn Thr Gly Asp
      705      710      715
Tyr Tyr Glu Asp Ser Tyr Glu Asp Ile Ser Ala Tyr Leu Leu Ser Lys
      720      725      730
Asn Asn Ala Ile Glu Pro Arg Ser Phe Ser Gln Asn Ser Arg His Pro
      735      740      745
Ser Thr Arg Gln Lys Gln Phe Asn Ala Thr Thr Ile Pro Glu Asn Asp
750      755      760      765
Ile Glu Lys Thr Asp Pro Trp Phe Ala His Arg Thr Pro Met Pro Lys
      770      775      780
Ile Gln Asn Val Ser Ser Ser Asp Leu Leu Met Leu Leu Arg Gln Ser

```


				1250						1255					1260
Lys	Lys	His	Thr	Ala	His	Phe	Ser	Lys	Lys	Gly	Glu	Glu	Glu	Asn	Leu
			1265							1270					1275
Glu	Gly	Leu	Gly	Asn	Gln	Thr	Lys	Gln	Ile	Val	Glu	Lys	Tyr	Ala	Cys
		1280						1285				1290			
Thr	Thr	Arg	Ile	Ser	Pro	Asn	Thr	Ser	Gln	Gln	Asn	Phe	Val	Thr	Gln
		1295					1300					1305			
Arg	Ser	Lys	Arg	Ala	Leu	Lys	Gln	Phe	Arg	Leu	Pro	Leu	Glu	Glu	Thr
1310						1315					1320				1325
Glu	Leu	Glu	Lys	Arg	Ile	Ile	Val	Asp	Asp	Thr	Ser	Thr	Gln	Trp	Ser
				1330					1335					1340	
Lys	Asn	Met	Lys	His	Leu	Thr	Pro	Ser	Thr	Leu	Thr	Gln	Ile	Asp	Tyr
			1345					1350					1355		
Asn	Glu	Lys	Glu	Lys	Gly	Ala	Ile	Thr	Gln	Ser	Pro	Leu	Ser	Asp	Cys
		1360						1365					1370		
Leu	Thr	Arg	Ser	His	Ser	Ile	Pro	Gln	Ala	Asn	Arg	Ser	Pro	Leu	Pro
		1375					1380					1385			
Ile	Ala	Lys	Val	Ser	Ser	Phe	Pro	Ser	Ile	Arg	Pro	Ile	Tyr	Leu	Thr
1390						1395					1400				1405
Arg	Val	Leu	Phe	Gln	Asp	Asn	Ser	Ser	His	Leu	Pro	Ala	Ala	Ser	Tyr
				1410					1415					1420	
Arg	Lys	Lys	Asp	Ser	Gly	Val	Gln	Glu	Ser	Ser	His	Phe	Leu	Gln	Gly
			1425					1430					1435		
Ala	Lys	Lys	Asn	Asn	Leu	Ser	Leu	Ala	Ile	Leu	Thr	Leu	Glu	Met	Thr
		1440					1445					1450			
Gly	Asp	Gln	Arg	Glu	Val	Gly	Ser	Leu	Gly	Thr	Ser	Ala	Thr	Asn	Ser
	1455					1460					1465				
Val	Thr	Tyr	Lys	Lys	Val	Glu	Asn	Thr	Val	Leu	Pro	Lys	Pro	Asp	Leu
1470					1475					1480					1485
Pro	Lys	Thr	Ser	Gly	Lys	Val	Glu	Leu	Leu	Pro	Lys	Val	His	Ile	Tyr
				1490						1495				1500	
Gln	Lys	Asp	Leu	Phe	Pro	Thr	Glu	Thr	Ser	Asn	Gly	Ser	Pro	Gly	His
			1505					1510					1515		
Leu	Asp	Leu	Val	Glu	Gly	Ser	Leu	Leu	Gln	Gly	Thr	Glu	Gly	Ala	Ile
		1520					1525					1530			
Lys	Trp	Asn	Glu	Ala	Asn	Arg	Pro	Gly	Lys	Val	Pro	Phe	Leu	Arg	Val
	1535					1540					1545				
Ala	Thr	Glu	Ser	Ser	Ala	Lys	Thr	Pro	Ser	Lys	Leu	Leu	Asp	Pro	Leu
1550					1555					1560					1565
Ala	Trp	Asp	Asn	His	Tyr	Gly	Thr	Gln	Ile	Pro	Lys	Glu	Glu	Trp	Lys
				1570					1575					1580	
Ser	Gln	Glu	Lys	Ser	Pro	Glu	Lys	Thr	Ala	Phe	Lys	Lys	Lys	Asp	Thr
			1585					1590					1595		
Ile	Leu	Ser	Leu	Asn	Ala	Cys	Glu	Ser	Asn	His	Ala	Ile	Ala	Ala	Ile
		1600					1605					1610			
Asn	Glu	Gly	Gln	Asn	Lys	Pro	Glu	Ile	Glu	Val	Thr	Trp	Ala	Lys	Gln
	1615					1620					1625				
Gly	Arg	Thr	Glu	Arg	Leu	Cys	Ser	Gln	Asn	Pro	Pro	Val	Leu	Lys	Arg
1630					1635					1640					1645
His	Gln	Arg	Glu	Ile	Thr	Arg	Thr	Thr	Leu	Gln	Ser	Asp	Gln	Glu	Glu
				1650					1655					1660	
Ile	Asp	Tyr	Asp	Asp	Thr	Ile	Ser	Val	Glu	Met	Lys	Lys	Glu	Asp	Phe
			1665					1670					1675		
Asp	Ile	Tyr	Asp	Glu	Asp	Glu	Asn	Gln	Ser	Pro	Arg	Ser	Phe	Gln	Lys
		1680					1685					1690			
Lys	Thr	Arg	His	Tyr	Phe	Ile	Ala	Ala	Val	Glu	Arg	Leu	Trp	Asp	Tyr
	1695					1700					1705				
Gly	Met	Ser	Ser	Ser	Pro	His	Val	Leu	Arg	Asn	Arg	Ala	Gln	Ser	Gly

```

1710          1715          1720          1725
Ser Val Pro Gln Phe Lys Lys Val Val Phe Gln Glu Phe Thr Asp Gly
          1730          1735          1740
Ser Phe Thr Gln Pro Leu Tyr Arg Gly Glu Leu Asn Glu His Leu Gly
          1745          1750          1755
Leu Leu Gly Pro Tyr Ile Arg Ala Glu Val Glu Asp Asn Ile Met Val
          1760          1765          1770
Thr Phe Arg Asn Gln Ala Ser Arg Pro Tyr Ser Phe Tyr Ser Ser Leu
          1775          1780          1785
Ile Ser Tyr Glu Glu Asp Gln Arg Gln Gly Ala Glu Pro Arg Lys Asn
1790          1795          1800          1805
Phe Val Lys Pro Asn Glu Thr Lys Thr Tyr Phe Trp Lys Val Gln His
          1810          1815          1820
His Met Ala Pro Thr Lys Asp Glu Phe Asp Cys Lys Ala Trp Ala Tyr
          1825          1830          1835
Phe Ser Asp Val Asp Leu Glu Lys Asp Val His Ser Gly Leu Ile Gly
          1840          1845          1850
Pro Leu Leu Val Cys His Thr Asn Thr Leu Asn Pro Ala His Gly Arg
          1855          1860          1865
Gln Val Thr Val Gln Glu Phe Ala Leu Phe Phe Thr Ile Phe Asp Glu
1870          1875          1880          1885
Thr Lys Ser Trp Tyr Phe Thr Glu Asn Met Glu Arg Asn Cys Arg Ala
          1890          1895          1900
Pro Cys Asn Ile Gln Met Glu Asp Pro Thr Phe Lys Glu Asn Tyr Arg
          1905          1910          1915
Phe His Ala Ile Asn Gly Tyr Ile Met Asp Thr Leu Pro Gly Leu Val
          1920          1925          1930
Met Ala Gln Asp Gln Arg Ile Arg Trp Tyr Leu Leu Ser Met Gly Ser
          1935          1940          1945
Asn Glu Asn Ile His Ser Ile His Phe Ser Gly His Val Phe Thr Val
1950          1955          1960          1965
Arg Lys Lys Glu Glu Tyr Lys Met Ala Leu Tyr Asn Leu Tyr Pro Gly
          1970          1975          1980
Val Phe Glu Thr Val Glu Met Leu Pro Ser Lys Ala Gly Ile Trp Arg
          1985          1990          1995
Val Glu Cys Leu Ile Gly Glu His Leu His Ala Gly Met Ser Thr Leu
          2000          2005          2010
Phe Leu Val Tyr Ser Asn Lys Cys Gln Thr Pro Leu Gly Met Ala Ser
          2015          2020          2025
Gly His Ile Arg Asp Phe Gln Ile Thr Ala Ser Gly Gln Tyr Gly Gln
2030          2035          2040          2045
Trp Ala Pro Lys Leu Ala Arg Leu His Tyr Ser Gly Ser Ile Asn Ala
          2050          2055          2060
Trp Ser Thr Lys Glu Pro Phe Ser Trp Ile Lys Val Asp Leu Leu Ala
          2065          2070          2075
Pro Met Ile Ile His Gly Ile Lys Thr Gln Gly Ala Arg Gln Lys Phe
          2080          2085          2090
Ser Ser Leu Tyr Ile Ser Gln Phe Ile Ile Met Tyr Ser Leu Asp Gly
          2095          2100          2105
Lys Lys Trp Gln Thr Tyr Arg Gly Asn Ser Thr Gly Thr Leu Met Val
2110          2115          2120          2125
Phe Phe Gly Asn Val Asp Ser Ser Gly Ile Lys His Asn Ile Phe Asn
          2130          2135          2140
Pro Pro Ile Ile Ala Arg Tyr Ile Arg Leu His Pro Thr His Tyr Ser
          2145          2150          2155
Ile Arg Ser Thr Leu Arg Met Glu Leu Met Gly Cys Asp Leu Asn Ser
          2160          2165          2170
Cys Ser Met Pro Leu Gly Met Glu Ser Lys Ala Ile Ser Asp Ala Gln

```

2175		2180		2185
Ile Thr Ala Ser Ser Tyr Phe Thr Asn Met Phe Ala Thr Trp Ser Pro				
2190		2195		2200
Ser Lys Ala Arg Leu His Leu Gln Gly Arg Ser Asn Ala Trp Arg Pro				2205
	2210		2215	2220
Gln Val Asn Asn Pro Lys Glu Trp Leu Gln Val Asp Phe Gln Lys Thr				
	2225		2230	2235
Met Lys Val Thr Gly Val Thr Thr Gln Gly Val Lys Ser Leu Leu Thr				
	2240		2245	2250
Ser Met Tyr Val Lys Glu Phe Leu Ile Ser Ser Ser Gln Asp Gly His				
	2255		2260	2265
Gln Trp Thr Leu Phe Phe Gln Asn Gly Lys Val Lys Val Phe Gln Gly				
2270		2275		2280
Asn Gln Asp Ser Phe Thr Pro Val Val Asn Ser Leu Asp Pro Pro Leu				
	2290		2295	2300
Leu Thr Arg Tyr Leu Arg Ile His Pro Gln Ser Trp Val His Gln Ile				
	2305		2310	2315
Ala Leu Arg Met Glu Val Leu Gly Cys Glu Ala Gln Asp Leu Tyr				
	2320		2325	2330